



Stony Brook University

Cold QCD Topical Group Plans

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Cold QCD Topical Group: Current Objectives

Forward sPHENIX LOI
(charge by B. Mueller)

Cold + Hot QCD



June 1st

EIC Detector LOI
(no current charge)



~ July

Forward sPHENIX LOI

1 Physics Case

- 1.1 Formation of Quark Gluon Plasma
- 1.2 Formation of Hadrons
- 1.3 Structure of Nucleons and Nuclei

2 Detector Design

- 2.1 Forward-sPHENIX Instrumentation Overview
- 2.2 Magnet system and field shaping
- 2.3 Tracking system
- 2.4 Electromagnetic Calorimeter
- 2.5 Hadron Calorimeter
- 2.6 Evolution to an Electron Ion Collider Detector

3 Detector Performance

- 3.1 Luminosity and running time assumptions
- 3.2 Forward tracking performance
- 3.3 Tracking in high multiplicity, i.e. Heavy Ion collisions
- 3.4 Calorimeter performance and effect of Plug Door
- 3.5 Forward jet energy and angle (η , ϕ) resolution
- 3.6 Physics analysis: Drell Yan
- 3.7 Physics analysis: Heavy Ions (what observable?)

Can we assume a
510 GeV pp run?

Who will help
with A+A case?

4 Budget